

CLAIMS

1. A method of making tablets of a cleaning composition or of a water-softening composition or tablet precursors
5 therefor, wherein:

a premix is made of cleaning or water-softening composition particulates and a lubricant;

10 the premix is fed into a feed port of an extruder; and

the resulting mixture is extruded;

wherein the extrusion is of one or more strands which are
15 separated into tablets or scored into tablet precursors, shortly after their extrusion, either as-extruded or after post-extrusion enhancement.

2. A method as claimed in claim 1 wherein a binder is fed
20 into the extruder at or downstream of the feed port, the binder being a solid at room temperature but being mixed with the cleaning or water-softening composition particles as a liquid or becoming a liquid inside the extruder.

25 3. A method as claimed in claim 1 or 2 wherein the extrusion pressure is in the range from 0.3 MPa to 10 MPa.

4. A method as claimed in claim 3 wherein the mixture is extruded at a pressure in excess of 1.2 MPa.

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5. A method as claimed in claim 4 wherein the mixture is extruded at a pressure in excess of 4 MPa.

6. A method as claimed in any preceding claim wherein the extruder is a twin screw extruder with screw overlap, configured predominantly for extrudate advancement and not for mixing or shearing the extrudate.

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7. A method as claimed in any preceding claim wherein a strand is subjected to post-extrusion enhancement.

8. A method as claimed in any preceding claim wherein a
10 strand is subjected to assisted post-extrusion cooling.

9. A method as claimed in any preceding claim wherein the temperature of the material in the extruder is in the range from 40 to 95°C, preferably from 40 to 85°C.

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10. A method as claimed in any preceding claim wherein the lubricant is a liquid at room temperature.

11. A method as claimed in any preceding claim wherein the
20 lubricant comprises a sucrose ester or a sorbitan ester.

12. A method as claimed in any preceding claim wherein the lubricant comprises a sucrose oleate.

25 13. A method as claimed in any preceding claim wherein the binder is a material which is solid at room temperature but which is molten under the extrusion conditions.

14. A method as claimed in any preceding claim wherein the
30 binder is polyethylene glycol.

15. A method of making tablets of a cleaning composition or of a water-softening composition, or tablet precursors therefor, wherein:

5 a premix is made of cleaning or water-softening composition particulates and a lubricant;

the premix is fed into a feed port of an extruder;

10 a binder is fed into the extruder at or downstream of the feed port, the binder being a solid at room temperature but being mixed with the cleaning or water-softening composition particles as a liquid or becoming a liquid inside the extruder;

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the resulting mixture is extruded at a pressure in excess of 4 MPa; and

the extrusion is of one or more strands which are
20 separated into tablets or scored into tablet precursors, shortly after their extrusion, either as-extruded or after post-extrusion enhancement.

16. A method of making cleaning or water-softening
25 composition tablets or tablet precursors therefor, wherein:

cleaning or water-softening composition particulates are fed into the feed port of an extruder;

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a binder is mixed with the cleaning or water-softening composition particles, prior to, at the same time as or after the cleaning or water-softening composition

particles are fed into the feed port, the binder being a solid at room temperature but being mixed with the cleaning or water-softening composition particles as a liquid or becoming a liquid inside the extruder;

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the resulting mixture is extruded at a pressure in excess of 4 MPa; and

the extrusion is of one or more strands which are
10 separated into tablets or scored into tablet precursors, shortly after their extrusion, either as-extruded or after post-extrusion enhancement.

17. A method as claimed in claim 16 wherein a lubricant is
15 mixed with the cleaning or water-softening composition particulates to make a premix which is fed into the extruder.

18. A method of making cleaning composition tablets or
20 tablet precursors, wherein a pasty or plastic cleaning or water-softening composition is advanced in an intermeshing twin screw extruder and extruded as a strand which is separated into tablets or tablet precursors shortly after their extrusion, either as-extruded or after post-
25 extrusion enhancement.

19. A method of making cleaning composition tablets wherein a pasty or plastic cleaning or water-softening composition is advanced in a forming extruder and extruded
30 as a strand which is separated into tablets or scored into tablet precursors, shortly after their extrusion, either as-extruded or after post-extrusion enhancement.

20. Use of a lubricant for the purpose of aiding the flow of inorganic cleaning or water-softening particulate in an extruder.

5 21. A cleaning or water-softening composition tablet or tablet precursor manufactured by a method as claimed in any preceding claim.

22. A tablet formed by a method or use as claimed in any
10 of claims 1 to 20, the tablet having a smooth skin and a core of consolidated particulate texture.

23. A method of washing wares or of softening water, using a tablet as claimed in claim 21 or 22.

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24. A method of lubricating a particulate material, the method comprising mixing a sucrose ester and/or a sorbitan ester with the particulate material.

20 25. A manufacturing method or washing method or water-softening method or tablet or tablet precursor or particulates lubricating method substantially as hereinbefore described with particular reference to the accompanying examples.